

## PCT REQUEST

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0	For receiving Office use only	
0-1	International Application No.	PCT/EP200 4 / 0 5 1 6 4 3
0-2	International Filing Date	28 JUL 2004 (28.07.2004)
0-3	Name of receiving Office and "PCT International Application"	EUROPEAN PATENT OFFICE PCT INTERNATIONAL APPLICATION
0-4	Form - PCT/RO/101 PCT Request	
0-4-1	Prepared Using	PCT Online Filing Version 3.50 (Build 0001.162)
0-5	Petition The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty	
0-6	Receiving Office (specified by the applicant)	European Patent Office (EPO) (RO/EP)
0-7	Applicant's or agent's file reference	CML01134EP
I	Title of Invention	OFDM CHANNEL ESTIMATION AND TRACKING FOR MULTIPLE TRANSMIT ANTENNA
II	Applicant	
II-1	This person is:	applicant only
II-2	Applicant for	all designated States except US
II-4	Name:	MOTOROLA INC
II-5	Address:	1303 E.Algonquin Road Schaumburg, Illinois 60196 United States of America
II-6	State of nationality	US
II-7	State of residence	US
II-8	Telephone No.	01256 790392
II-9	Facsimile No.	01256 811319
II-10	e-mail	derek.mccormack@motorola.com
II-11	Applicant's registration No. with the Office	33341892

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<b>III-1</b>	<b>Applicant and/or inventor</b>	
III-1-1	This person is:	applicant and inventor
III-1-2	Applicant for	US only
III-1-4	Name (LAST, First)	RIBEIRO DIAS, Alexandre
III-1-5	Address:	37 Avenue Reille 75014 Paris France
III-1-6	State of nationality	FR
III-1-7	State of residence	FR
<b>III-2</b>	<b>Applicant and/or inventor</b>	
III-2-1	This person is:	applicant and inventor
III-2-2	Applicant for	US only
III-2-4	Name (LAST, First)	DE COURVILLE, Marc
III-2-5	Address:	43 Rue du moulin vert 75014 Paris France
III-2-6	State of nationality	FR
III-2-7	State of residence	FR
<b>III-3</b>	<b>Applicant and/or inventor</b>	
III-3-1	This person is:	applicant and inventor
III-3-2	Applicant for	US only
III-3-4	Name (LAST, First)	MUCK, Markus
III-3-5	Address:	67-69 Rue de la colonie 75013 Paris France
III-3-6	State of nationality	FR
III-3-7	State of residence	FR

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<b>IV-1</b>	<b>Agent or common representative; or address for correspondence</b> The person identified below is hereby/ has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:	<b>agent</b>
<b>IV-1-1</b>	<b>Name (LAST, First)</b>	<b>MCCORMACK,, Derek J.</b>
<b>IV-1-2</b>	<b>Address:</b>	<b>Motorola European Intellectual Property Operations Midpoint, Alencon Link Basingstoke Hampshire RG21 7PL United Kingdom</b>
<b>IV-1-3</b>	<b>Telephone No.</b>	<b>+44 1256 790 392</b>
<b>IV-1-4</b>	<b>Facsimile No.</b>	<b>+44 1256 811319</b>
<b>IV-1-5</b>	<b>e-mail</b>	<b>derek.mccormack@motorola.com</b>
<b>V</b>	<b>DESIGNATIONS</b>	
<b>V-1</b>	<b>The filing of this request constitutes under Rule 4.9(a), the designation of all Contracting States bound by the PCT on the International filing date, for the grant of every kind of protection available and, where applicable, for the grant of both regional and national patents.</b>	
<b>VI-1</b>	<b>Priority claim of earlier regional application</b>	
<b>VI-1-1</b>	<b>Filing date</b>	<b>28 August 2003 (28.08.2003)</b>
<b>VI-1-2</b>	<b>Number</b>	<b>03292120.7</b>
<b>VI-1-3</b>	<b>Regional Office</b>	<b>EP</b>
<b>VI-2</b>	<b>Priority document request</b> The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s):	<b>VI-1</b>
<b>VII-1</b>	<b>International Searching Authority Chosen</b>	<b>European Patent Office (EPO) (ISA/EP)</b>

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VIII	Declarations	Number of declarations	
VIII-1	Declaration as to the identity of the inventor	1	
VIII-2	Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent	1	
VIII-3	Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application	1	
VIII-4	Declaration of inventorship (only for the purposes of the designation of the United States of America)	1	
VIII-5	Declaration as to non-prejudicial disclosures or exceptions to lack of novelty	-	

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VIII-1-1	<b>Declaration: Identity of the Inventor</b> Declaration as to the identity of the inventor (Rules 4.17(i) and 51bis.1(a)(i))	in relation to this international application
	Name (LAST, First) Address:	RIBEIRO DIAS, Alexandre of 37 Avenue Reille 75014 Paris France is the inventor of the subject matter for which protection is sought by way of this international application
	Name (LAST, First) Address:	DE COURVILLE, Marc of 43 Rue du moulin vert 75014 Paris France is the inventor of the subject matter for which protection is sought by way of this international application
	Name (LAST, First) Address:	MUCK, Markus of 67-69 Rue de la colonie 75013 Paris France is the inventor of the subject matter for which protection is sought by way of this international application
	This declaration is made for the purposes of:	all designations except the designation of the United States of America

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VIII-2-1	<b>Declaration: Entitlement to apply for and be granted a patent</b> Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent (Rules 4.17(ii) and 51bis.1(a)(ii)), in a case where the declaration under Rule 4.17(iv) is not appropriate: Name (LAST, First)	<b>in relation to this international application</b>  MOTOROLA INC is entitled to apply for and be granted a patent by virtue of the following:
VIII-2-1(i)		MOTOROLA INC is entitled as employer of the inventor, RIBEIRO DIAS, Alexandre
VIII-2-1(i)		MOTOROLA INC is entitled as employer of the inventor, DE COURVILLE, Marc
VIII-2-1(i)		MOTOROLA INC is entitled as employer of the inventor, MUCK, Markus
VIII-2-1(i x)	This declaration is made for the purposes of:	all designations except the designation of the United States of America

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VIII-3-1	<b>Declaration: Entitlement to claim priority</b> Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application specified below, where the applicant is not the applicant who filed the earlier application or where the applicant's name has changed since the filing of the earlier application (Rules 4.17(iii) and 51bis.1(a)(iii)) Name:	in relation to this international application  MOTOROLA INC is entitled to claim priority of earlier application No. 03292120.7 by virtue of the following:
VIII-3-1(i)		MOTOROLA INC is entitled as employer of the inventor, RIBEIRO DIAS, Alexandre
VIII-3-1(i)		MOTOROLA INC is entitled as employer of the inventor, DE COURVILLE, Marc
VIII-3-1(i)		MOTOROLA INC is entitled as employer of the inventor, MUCK, Markus
VIII-3-1(x)	This declaration is made for the purposes of:	all designations

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VIII-4-1	<b>Declaration: Inventorship (only for the purposes of the designation of the United States of America)</b> Declaration of Inventorship (Rules 4.17(iv) and 51bis.1(a)(iv)) for the purposes of the designation of the United States of America:	<p>I hereby declare that I believe I am the original, first and sole (if only one inventor is listed below) or joint (if more than one inventor is listed below) inventor of the subject matter which is claimed and for which a patent is sought.</p> <p>This declaration is directed to the international application of which it forms a part (if filing declaration with application).</p> <p>I hereby declare that my residence, mailing address, and citizenship are as stated next to my name.</p> <p>I hereby state that I have reviewed and understand the contents of the above-identified international application, including the claims of said application. I have identified in the request of said application, in compliance with PCT Rule 4.10, any claim to foreign priority, and I have identified below, under the heading "Prior Applications", by application number, country or Member of the World Trade Organization, day, month, and year of filing, any application for a patent or inventor's certificate filed in a country other than the United States of America, including any PCT international application designating at least one country other than the United States of America, having a filing date before that of the application on which foreign priority is claimed.</p>
VIII-4-1-1	Prior applications:	03292120.7, EP, 28 August 2003 (28.08.2003)



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		<p>I hereby acknowledge the duty to disclose information that is known by me to be material to patentability as defined by 37 C.F.R. § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the PCT international filing date of the continuation-in-part application.</p> <p>I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.</p>
VIII-4-1-1-1	Name (LAST, First)	RIBEIRO DIAS, Alexandre
VIII-4-1-1-2	Residence: (city and either US State, if applicable, or country)	Paris, France
VIII-4-1-1-3	Mailing address:	37 Avenue Reille F-75014 Paris France
VIII-4-1-1-4	Citizenship:	FR
VIII-4-1-1-5	Inventor's Signature: (if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application. The signature must be that of the inventor, not that of the agent)	/Alexandre Ribeiro Dias/
VIII-4-1-1-6	Date: (of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)	28 July 2004 (28.07.2004)

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VIII-4-1-2-1	Name (LAST, First)	DE COURVILLE, Marc
VIII-4-1-2-2	Residence: (city and either US State, if applicable, or country)	Paris, France
VIII-4-1-2-3	Mailing address:	43 Rue du moulin vert F-75014 Paris France
VIII-4-1-2-4	Citizenship:	FR
VIII-4-1-2-5	Inventor's Signature: (if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the International application. The signature must be that of the inventor, not that of the agent)	/Marc De Courville/
VIII-4-1-2-6	Date (of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)	28 July 2004 (28.07.2004)
VIII-4-1-3-1	Name (LAST, First)	MUCK, Markus
VIII-4-1-3-2	Residence: (city and either US State, if applicable, or country)	Paris, France
VIII-4-1-3-3	Mailing address:	67-69 Rue de la colonie F-75013 Paris France
VIII-4-1-3-4	Citizenship:	FR
VIII-4-1-3-5	Inventor's Signature: (if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application. The signature must be that of the inventor, not that of the agent)	/Markus Muck/
VIII-4-1-3-6	Date (of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)	28 July 2004 (28.07.2004)

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IX	Check list	number of sheets	electronic file(s) attached
IX-1	Request (including declaration sheets)	11	✓
IX-2	Description	16	✓
IX-3	Claims	4	✓
IX-4	Abstract	1	✓
IX-5	Drawings	2	✓
IX-7	TOTAL	34	
	<b>Accompanying Items</b>	<b>paper document(s) attached</b>	<b>electronic file(s) attached</b>
IX-8	Fee calculation sheet	-	✓
IX-17	PCT-SAFE physical media	-	-
IX-19	Figure of the drawings which should accompany the abstract	1	
IX-20	Language of filing of the international application	English	
X-1	Signature of applicant, agent or common representative	/Derek J McCormack/	
X-1-1	Name (LAST, First)	McCORMACK,, Derek J.	
X-1-2	Name of signatory		
X-1-3	Capacity		

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10-1	Date of actual receipt of the purported international application	28 JUL 2004 ( 28. 07. 2004 )
10-2	Drawings:	✓
10-2-1	Received	
10-2-2	Not received	
10-3	Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application	
10-4	Date of timely receipt of the required corrections under PCT Article 11(2)	
10-5	International Searching Authority	ISA/EP
10-6	Transmittal of search copy delayed until search fee is paid	

## FOR INTERNATIONAL BUREAU USE ONLY

11-1	Date of receipt of the record copy by the International Bureau	
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